Interaction of iqs and Q-DAS® Software Products

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In order to benefit from the advantages of the iqs CAQ software and to use the strength of the statistical analysis of Q-DAS®, both companies formed a partnership and now provide their software products as one package. Both companies started this development by combining the iqs Inspection Plan with the Q-DAS® SPC data recording software procella® and by connecting the iqs Inspection Equipment Management to the Q-DAS® software solara.MP for measurement process capability analysis.

Most companies are concerned with different matters of quality assurance and deal with them by using various methods. There is the planning and organizational level and the level of operation.

Planning and Organizational Level

Before producing products, these products are often subject of an extensive planning phase. Companies apply various methods and tools in this planning phase, such as FMEA, control plan and initial sampling. During series production or afterwards neither complaints nor the inspection equipment management play a role. iqs offers the tools required on this level.

Level of Operation

The specifications of the planning level are realized on the level of operation, e.g. by conducting measurement system, machine and process capability analyses.

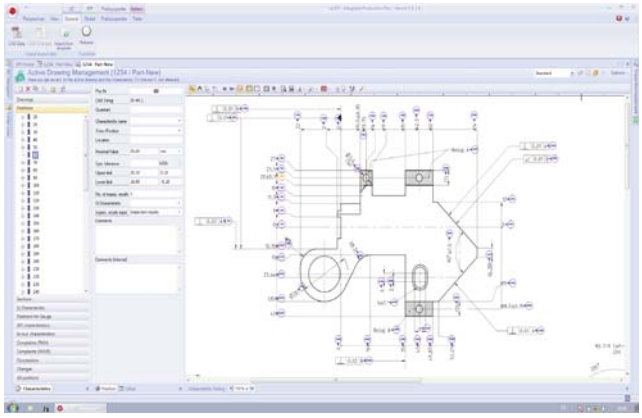
There is a close connection between the planning phase and the real implementation prior to, during and after series production. This is the reason why Q-DAS® cooperates with iqs.

Merging Both Levels

The aim of the cooperation between Q-DAS® and iqs is to make both levels permanently available to users regardless of whether they apply the iqs or Q-DAS® software. As an example, users do not have to create an inspection plan in both systems; it is only available once and users can access it in both systems for respective applications. This option reduces organizational efforts on the one hand and offers a wider application range of centralized data on the other hand. In the end, processes become more transparent since users are able to access all information on a product. Operators get a summary of any information quickly starting with the creation of the inspection plan based on CAD data, to FMEA, initial sampling, data recording and capability analysis, right through to complaints management.

Inspection Plan and Recording of Measured Data

iqs and Q-DAS® synchronize data via WebService interface. In order to do so, iqs fills a cache memory with inspection plan information after the iqs system released the corresponding inspection plan. Only these inspection plans will be available in procella® for recording data. Moreover, this functionality defines any further information to be transferred, e.g. which characteristics shall be included in a SPC measurement and whether you want to transfer information from drawings (drawing details).



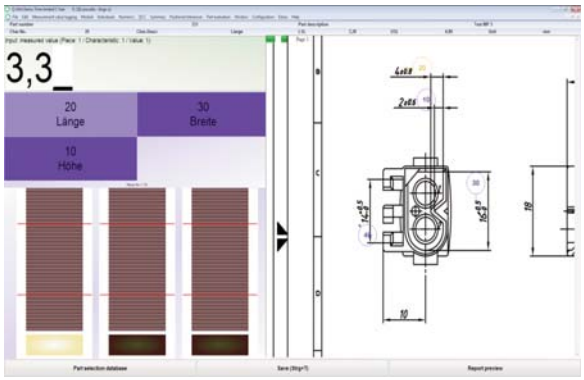
Stamp iqs drawing and select characteristics

procella® accesses this information directly. For this reason you may use the inspection plan immediately for recording data without having to create it in procella® first. Now procella® conducts the inspections and saves the measured data in the Q-DAS® database. You may use them later for statistical analysis.

Since procella® guides operators through the measurement process, it is quite useful that CAD drawings already saved in the iqs system are also transferred and displayed in procella®. Thus operators display the drawing of each characteristic including the position of the characteristic (stamp).

Current Inspection Plans Always Available

In case the iqs inspection plan changes, these changes are automatically transferred to procella®. Every time the operator opens an iqs inspection plan in procella®, the program checks whether there are changes in the inspection plan. Changes are e.g. modified tolerance limits or new characteristics to be inspected. This check



CAD drawing from iqs displayed in procella®

ensures that the program always transfers and analyzes the correct information.

The implementation of this concept only requires the installation of the iqs software and procella®. Any necessary settings are adjusted in procella®. However, these settings are adjusted automatically when installing procella®. The operator only has to select the "iqs Inspection Plan" function in order to load the current data from the shared memory.

In the future, procella® will also transfer measurement results to the iqs CAQ system after the measurement is completed. Especially in case of deviations, it is reasonable to process this kind of information. The feedback provided by procella® can be applied for further use in the complaints management, action management, special releases and FMEA.

Inspection Equipment Management and Measurement Process Capability

There is still an interaction between the iqs module Inspection Equipment Management and the Q-DAS® software solara.MP for measurement process capability. The iqs Inspection Equipment Management organizes inspection equipment. Measuring equipment or measurement system capability analyses at regular intervals are part of this organization. It seems obvious to make these capability analyses by using the Q-DAS® software solara.MP intended for this use. iqs transfers the required information to solara.MP. The program now opens automatically and starts the respective statistical calculations. solara.MP is able to create reports on a capability analysis as a PDF document or to provide defined statistics (evaluation results). The iqs system imports these results and allocates them to the corresponding inspection equipment. In the end, users gain a system that is responsible for the management - the iqs Inspection Equipment Management - and a system performing detailed analyses - solara.MP. Due to the interaction between these two components, users are able to benefit from the advantages of both software products.